

CLAIMS

1. A method of broadcasting a digital traffic map comprising:
transmitting to a plurality of receivers a first road segment having a first segment
first endpoint and a first segment second endpoint, and
5 transmitting to a plurality of receivers a second road segment having a second
segment first endpoint and a second segment second endpoint wherein the first
segment and the second segment are combined together to form a portion of the
digital map.
2. A method of broadcasting a digital traffic map as in claim 1 wherein the first
10 segment has a segment state.
3. A method of broadcasting a digital traffic map as in claim 1 wherein the first
segment has a segment state that varies over time.
4. A method of broadcasting a digital traffic map as in claim 1 wherein the first
segment has a segment state including speed information.
- 15 5. A method of broadcasting a digital traffic map as in claim 1 wherein the first
segment has a segment state including weather information.
6. A method of broadcasting a digital traffic map as in claim 1 wherein the first
segment has a segment state including accident information.
7. A method of broadcasting a digital traffic map as in claim 1 wherein the first
20 segment is part of a polygon that enclose an area of interest.
8. A method of broadcasting a digital traffic map as in claim 1 wherein the first
segment has a segment state including road condition information.

9. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and a transmitter transmits an updated segment state based on a real-time measurement.
10. A method of broadcasting a digital traffic map as in claim 1 wherein the first
5 segment has a segment state and the source of information for the segment state is a sensor.
11. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the source of information for the segment state is a private database.
- 10 12. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the source of information for the segment state is a public database.
13. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is derived by processing
15 information from a sensor.
14. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is derived by processing information from a private database.
15. A method of broadcasting a digital traffic map as in claim 1 wherein the first
20 segment has a segment state and the segment state is derived by processing information from a public database.

16. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is derived by correcting speed data for a mounting angle of a sensor.
17. A method of broadcasting a digital traffic map as in claim 1 wherein the first
5 segment has a segment state and the segment state is derived by converting a raw speed to an effective speed.
18. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is derived by converting a raw speed to an effective speed using measurements of a vehicle traveling a given
10 road segment.
19. A method of broadcasting a digital traffic map as in claim 1 wherein the road segment endpoints are transmitted in a road segment data packet.
20. A method of broadcasting a digital traffic map as in claim 1 wherein the road segment endpoints are transmitted in a road segment data packet that is comprised
15 of a segment identifier, a first endpoint longitude and latitude, and a second endpoint longitude and latitude.
21. A method of broadcasting a digital traffic map as in claim 1 wherein the road segment endpoints are transmitted in a road segment data packet that is comprised of a segment identifier, a first endpoint longitude and latitude, a second endpoint
20 longitude and latitude, a name, and a road type.
22. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment speed state and the segment speed state is transmitted in a speed update information packet.

23. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment speed state and the segment speed state is transmitted in a speed update information packet that is comprised of a segment identifier and a speed.
- 5 24. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and a transmitter transmits an updated segment state that is used to update a database.
25. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is used to update an optimum trip plan.
- 10 26. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is used to update an optimum route plan.
27. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is used to update a digital map display.
- 15 28. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is used to update a digital map display whose displayed level of detail depends on the size of the area displayed in the display.
- 20 29. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is used to update a digital map display whose displayed level of detail depends on a user selection.

30. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment state and the segment state is used to update a digital map display of the area near to the receiver location.
31. A method of broadcasting a digital traffic map as in claim 1 wherein the first
5 segment has a segment speed state and the color of a road segment on a digital map display corresponds to the segment speed state.
32. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment speed state and the shade of gray of a road segment on a digital map display corresponds to the segment speed state.
- 10 33. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment speed state and a pattern of a road segment on a digital map display corresponds to the segment speed state.
34. A method of broadcasting a digital traffic map as in claim 1 wherein the first segment has a segment speed state and a user selects one of a table of different
15 colors, an alternate table of different colors, a table of different shades of gray, or a table of different patterns to correspond to speeds on a digital map display.
35. A method of receiving a digital traffic map comprising:
receiving from a transmitter a first road segment having a first segment first endpoint and a first segment second endpoint, and
20 receiving from a transmitter a second road segment having a second segment first endpoint and a second segment second endpoint wherein the first segment and the second segment are combined together to form a portion of the digital map.